REMARKS

The Examiner rejected claims 1-5, 9, 14-16, 19 and 23 under 35 U.S.C. §102(b) as being anticipated by Hollander et al. Specifically the Examiner stated that Hollander discloses a digital multimeter 1 with non-contact temperature measurement capability as claimed by Applicant in Claims 1-5, 9, 14-16, 19 and 23: comprising a multimeter 1 contained in a housing and having outputs relating to measured electrical parameters (col. 5, lines 27-31); an (digital) output display 2 (col. 2, lines 12-13) contained in the housing, for displaying results to a user; a non-contact optically-based (infrared) temperature sensing device (col. 5, lines 22-25) coupled to (Hollander discloses the device is 'built-in' so it is both 'coupled to' the housing as claimed by Applicant in Claim 1 and 'within' the housing as claimed by the Applicant in claim 19), having an output related to sensed temperature; and circuitry (e.g. col. 12, lines 58-65) contained in the housing for processing both the multimeter outputs and the temperature sensing device output, and transmitting (col. 5, lines 1) the processed output to the output display as claimed by Applicant in claims 1-3 and 19.

In response, the Applicant respectfully traverses the rejection. Athough the Applicant acknowledges that Hollander discloses a multimeter with a built-in infra-red sensor for non-contact temperature measurement as shown in Hollander's Figure 1, Hollander does not disclose a multimeter with a built-in temperature sensor with circuitry contained in the housing for processing both the multimeter outputs and the temperature sensing device output, and transmitting the processed output to the output display as is claimed in both of the Applicant's independent claims 1 and 19. Although the Examiner refers to col. 12, lines 58-65 of Hollander, that portion of Hollander's specification

describes the device shown in Figures 18, 19, and 20 which does not include a multimeter and is not built-in. Hollander does not describe or suggest that Hollander's device shown in Figure 1 may be combined with Hollander's very different device shown in Figures 18-20. In fact, Hollander teaches away from such a combined device by virtue of Hollander's pyrometer shown in Figures 4 and 5 with a laser sighting device and an external multimeter housing 106 provided on the top of the pyrometer. Hollander also teaches away from the combination because Hollander's built-in device shown in Figure 1 requires an adjustable emissivity (col. 5, lines 22-26).

The Applicant has amended claim 2 to add a fixed emissivity. With regard claims 17-18, and 27-28, which also require a fixed emissivity, the Examiner cited Hollander in view of Wadman, concluding that Wadman discloses that "emissivity has a constant value in many processes, consequently its value is to be determined only once." The Applicant respectfully traverses these rejections. For all the reasons noted above with respect to Hollander and for the following reasons.

As the Examiner pointed out, although Hollander generally discloses a multimeter with a built-in temperature sensor, Hollander does not disclose a temperature sensing device having a fixed emissivity. Instead, Hollander, despite the prior teaching of Wadman, specifically teaches that Hollander's emissivity for the infra-red measurement is adjustable from 0.1 to 1.0 (col. 5, lines 22-26), thus teaching away from a fixed emissivity. Wadman does not teach or suggest that a fixed emissivity would be appropriate or applicable in all situations and, in fact, the only example Wadman provides for a situation in which there would be a fixed emissivity is within an oven. Further, Wadman does not describe a temperature sensor that applies a fixed emissivity.

Instead, Wadman's standalone pyrometer does not apply a fixed emissivity, rather Wadman's pyrometer includes an optical integrator arranged in the radiation path of the measuring radiation between the radiation source and the measuring radiation detector to determine the reflection measurement over the spatial angle of the hemisphere. As such, it would not have been obvious, as it was not to Hollander, to used a fixed emissivity with Hollander's multimeter with a non-contact, built-in temperature sensor.

The Examiner has rejected claims 6-8 under 35 U.S.C. §103(a) as being unpatentable over Hollander in view of Bartosiak. Specifically, the Examiner states that Hollander does not explicitly disclose that the sense axis is adjustable relative to the housing (claim 6), and mounted in a mount that is coupled to and movable relative to the housing (claim 7), and rotatably coupled to the housing (claim 8). However, the Examiner further states that Bartosiak discloses a remote pickup head 18, part of an infrared thermometer, rotatably coupled to a mount 28 (housing 18 of sensor head 20' see Figs. 2A, 2D; Col. 3, lines 28-35) by threaded cable connector 31, whereby the sense axis (of pickup head 12) is coupled to and movable relative to the housing 28.

The Examiner therefore concludes that it would have been obvious to substitute the remote pickup head with adjustable sense axis for Hollander's sense axis to provide for remote measurement of high measurement processes. The Applicant respectfully traverses these rejections for the reasons stated above with regard to Hollander and for the following additional reasons.

The Examiner does not provide any motivation specifically from either reference to do so. Yet neither Hollander nor Bartosiak are concerned with providing a remote sensor having a sense axis that is adjustable relative to the housing. Instead, Bartosiak

teaches away from a sense axis that is adjustable relative to the housing by explicitly teaching that the center of fiber optic cable 18 should be in direct alignment with the focal axis 36 of the relay lens 50. (col. 3, lines 57-60) In addition, Bartosiak's remote pick-up head 18 is connected to the sensor head 20 and photosensor circuit by a 3 to 6 foot long fiber optic cable that is in turn connected back to the processing, analyzing indicator 24 through an electrical data cable. Bartosiak's remote pick-up 18 must also be independently fixed is a precise plane spaced from the relay lens 50, making Bartosiak's system, which is far from being built-in, unwieldy and contrary to the purpose of the Applicant's invention.

The Examiner has rejected claim 20-22 under 35 U.S.C. §103(a) as being unpatentable over Hollander in view of Anderson et al. The Examiner applied the same reasoning for rejecting claims 1-5, 9, 14-16, 19 and 23 noting, however, that Hollander does not disclose the feature of a sense axis that is adjustable relative to the housing (claim 20) and mounted in a mount that is coupled to and movable relative to the housing (claim 21) and rotatably coupled to the housing (claim 22). However, the Examiner states that Anderson discloses IR detector 49 mounted in a bracket by a screw as shown in Figure 2 and that Anderson discloses or suggests that the sensing axis of the IR detector 49 is directed through the center of lens 19 by means of dichroic mirror 47 and parallel to the housing cover 13. The Examiner further states that Anderson is "evidence that ordinary workers in the field of infrared temperature sensors would recognize the benefit of using a rotatably coupled adjustable mount for coupling an IR detector to the housing to align the sensing axis to be parallel to the housing cover to aim the device.

The Applicant respectfully traverses the rejection for all the reasons noted above with respect to Hollander and for the following reasons. Although Anderson discloses a radiometer that utilizes a beam splitting optical system to combine an image of the target with an an image of an illuminated visual meter to permit the target to be scanned for temperature variations, Anderson does not disclose or suggest a sense axis that is adjustable relative to the housing; or a sensing device that is mounted in a mount that is coupled to and movable relative to the housing; or sensing device mount that is rotatably coupled to the housing. Instead, Anderson beam splitter is fixed securely in a place. It is not adjustable or rotatable.

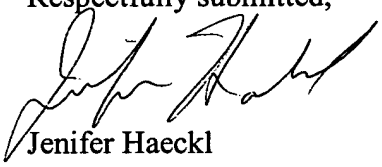
The Examiner has also rejected claims 10-12 and 24-26 under 35 U.S.C. §103(a) as being unpatentable over Hollander in view of Litvin et al. The Examiner applied the same reasoning for rejecting claims 1-5, 9, 14-16, 19 and 23 noting, however, that Hollander does not disclose an aiming axis that is adjustable relative to the housing (claims 10 and 24); in which the optical aiming device is mounted in a mount that is coupled to and movable relative to the housing, to allow the user to aim the optical aiming device (claims 11 and 25); and in which the optical aiming device mount is rotatably coupled to the housing (claims 12 and 26). The Examiner further states that Litvin discloses an adjustable beam alignment system for a non-contact infrared temperature-measuring unit, including beam splitter assembly 20 having a beam splitter housing 21 that is rotatably coupled to and movable relative to the housing of the infrared temperature-measuring unit, which functions to make the aiming axis adjustable relative to the housing by adjusting mirror element 40.

In response the Applicant has amended claims 10 and 24 and, in part, traverses the rejection by reiterating his reasons with respect to Hollander. As amended, claims 10 and 24 more specifically claim that the aiming device comprises a laser that is adjustable not just merely redirecting the beam using a mirror as does Litvin.

Each of the Examiner's rejections has been addressed. Accordingly, it is respectfully submitted that the application is in condition for allowance. Early and favorable action is requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned in Worcester, Massachusetts at (508) 791-8500.

Respectfully submitted,



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